

# FIG. 1

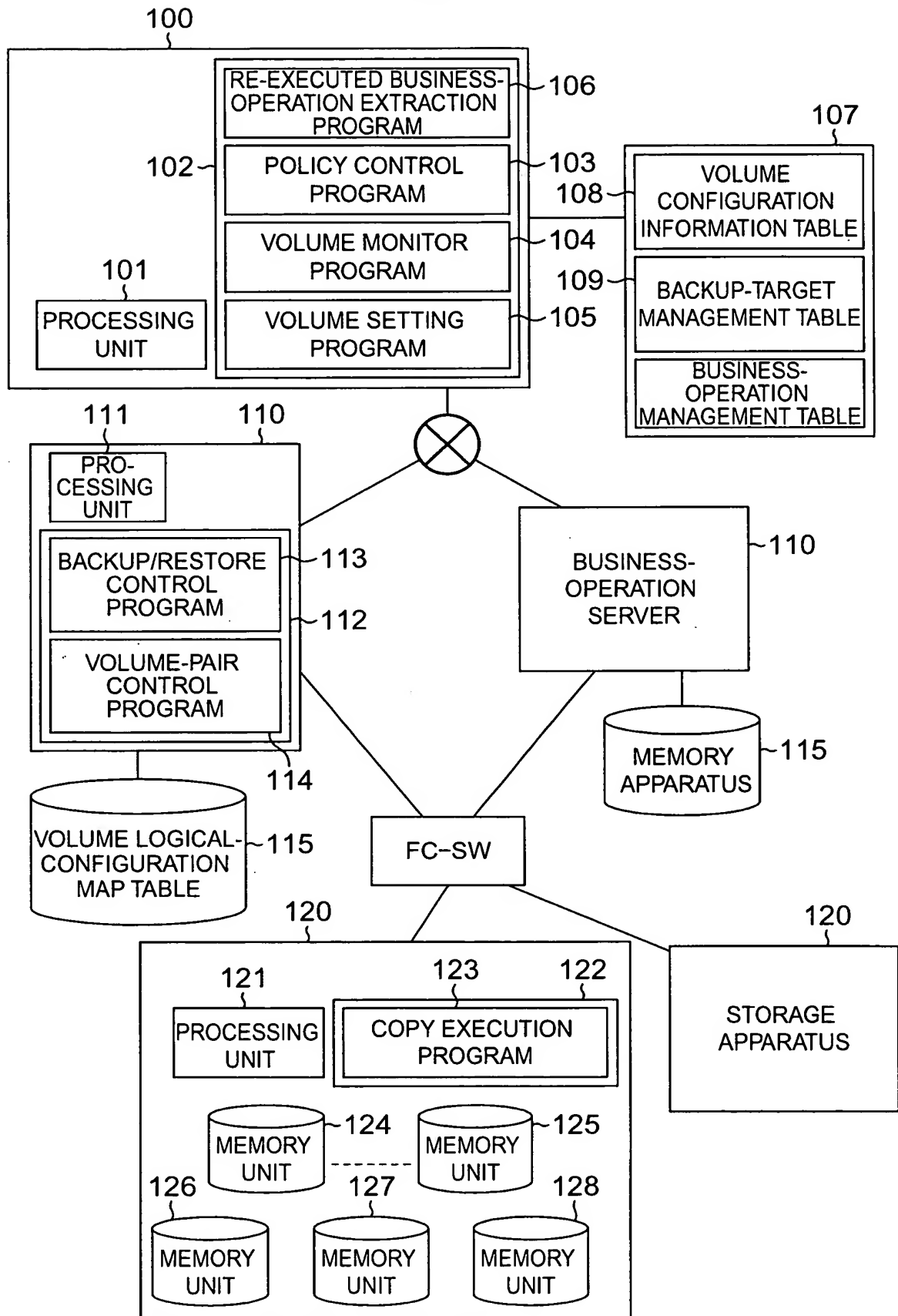


FIG. 2

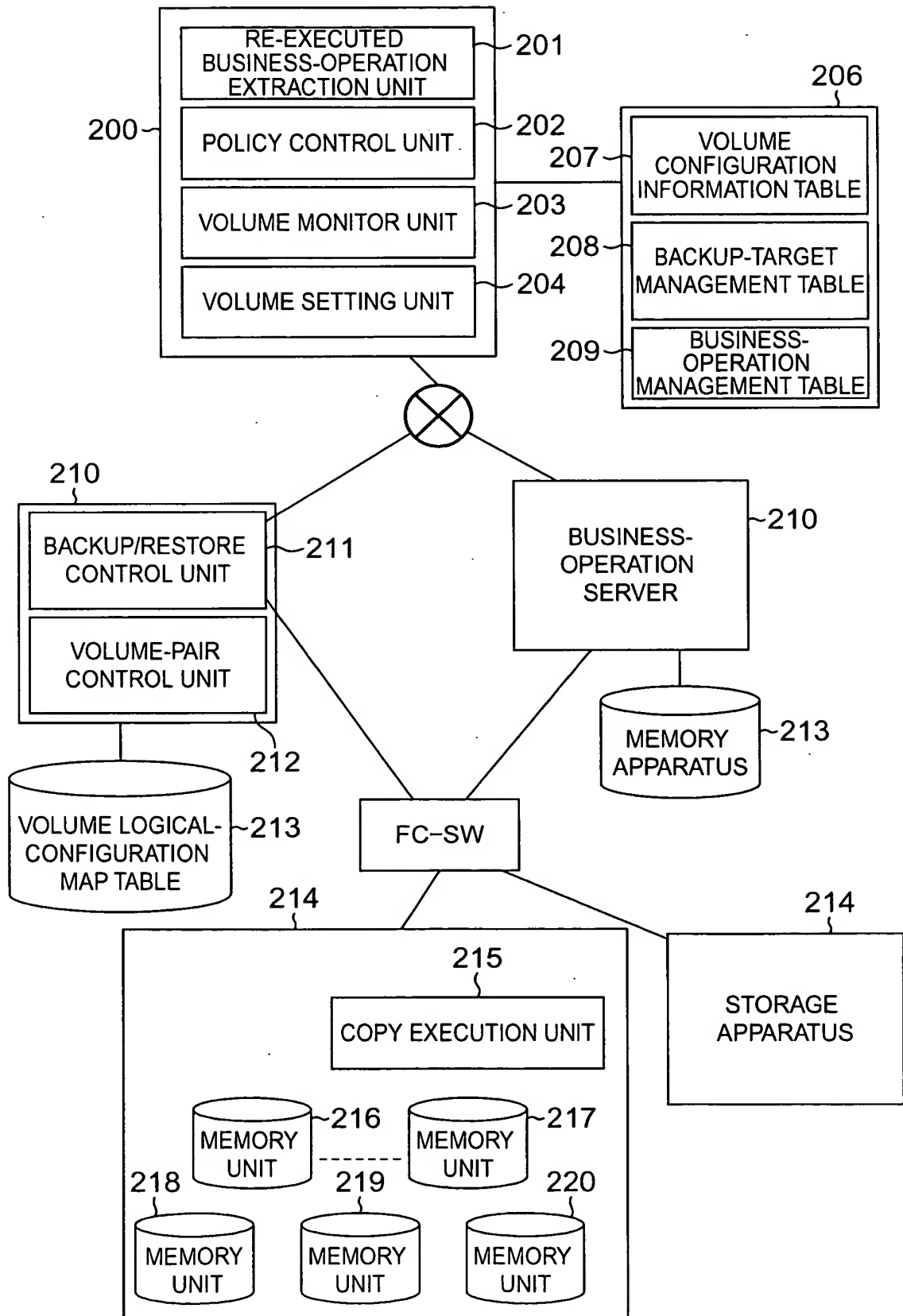


FIG. 3

| 300         | 301              | 302         | 303                      | 305                    | 304                        | 306                    | 307 |
|-------------|------------------|-------------|--------------------------|------------------------|----------------------------|------------------------|-----|
| GROUP       | BACKUP<br>TARGET | SERVER      | EXPIRATION<br>TIME-LIMIT | POLICY                 |                            |                        |     |
|             |                  |             |                          | "NEWEST<br>STATE ONLY" | "SECONDARY<br>UTILIZATION" | "DISASTER<br>RECOVERY" |     |
| A           | System           | A           | —                        | FLAG IS<br>PRESENT     | —                          | —                      |     |
| B           | Temp             | A           | 2 weeks                  | FLAG IS<br>PRESENT     | FLAG IS<br>PRESENT         | —                      |     |
| C           | System,ccc.txt   | A           | —                        | —                      | FLAG IS<br>PRESENT         | —                      |     |
| D           | Temp,ddd.txt     | A,B         | 1 year                   | FLAG IS<br>PRESENT     | —                          | FLAG IS<br>PRESENT     |     |
| E           | System,eee.txt   | B           | —                        | —                      | —                          | FLAG IS<br>PRESENT     |     |
| :<br>:<br>: | :<br>:<br>:      | :<br>:<br>: | :<br>:<br>:              | :<br>:<br>:            | :<br>:<br>:                | :<br>:<br>:            |     |
| Q           | qqq.txt          | C           | —                        | FLAG IS<br>PRESENT     | —                          | —                      |     |

# FIG. 4

| 400<br>DATABASE<br>NAME | 401<br>FILE NAME | 402<br>DEVICE<br>FILE NAME | 403<br>DISK ID | 404<br>HOUSING<br>ID |
|-------------------------|------------------|----------------------------|----------------|----------------------|
| system                  | aaa.txt          | c5t0d1                     | 001            | 100                  |
| system                  | bbb.txt          | c5t0d2                     | 003            | 100                  |
| temp                    | ccc.txt          | c5t0d3                     | 003            | 100                  |
| :                       | :                | :                          | :              | :                    |
| —                       | qqq.txt          | c6t1d3                     | 002            | 200                  |
| :                       | :                | :                          | :              | :                    |

# FIG. 5

| 500<br>BUSINESS-<br>OPERATION<br>NAME | 501<br>NECESSARY DATA               |
|---------------------------------------|-------------------------------------|
| A                                     | —                                   |
| B                                     | (A,aaa.txt)                         |
| C                                     | (A,aaa.txt),(B,bbb.txt)             |
| D                                     | (A,aaa.txt),(C,temp)                |
| E                                     | (A,aaa.txt),(B,bbb.txt),(C,ddd.txt) |

FIG. 6

| DISK ID | HOUSING ID | USE SERVER | TYPE      | PAIR-DISK ID | PAIR-HOUSING ID | AVAILABLE FLAG | REPLICATION DATA |               |                   | FAULT FLAG |
|---------|------------|------------|-----------|--------------|-----------------|----------------|------------------|---------------|-------------------|------------|
|         |            |            |           |              |                 |                | GROUP            | BACKUP TARGET | GENERATION NUMBER |            |
| 001     | 100        | A          | ORIGINAL  | 003          | 100             | —              | —                | —             | —                 |            |
| 002     | 100        | B          | DUPLICATE |              |                 | —              | A                | aaa.txt       | 1                 | ABSENT     |
| 003     | 100        | A          | DUPLICATE | 001          | 100             | —              | C                | aaa.txt       | 2                 | ABSENT     |
|         |            |            |           |              |                 |                |                  |               |                   |            |
| 005     | 200        | C          | DUPLICATE | 002          | 200             | —              | F                | Fff.txt       | 3                 | PRESENT    |

FIG. 7

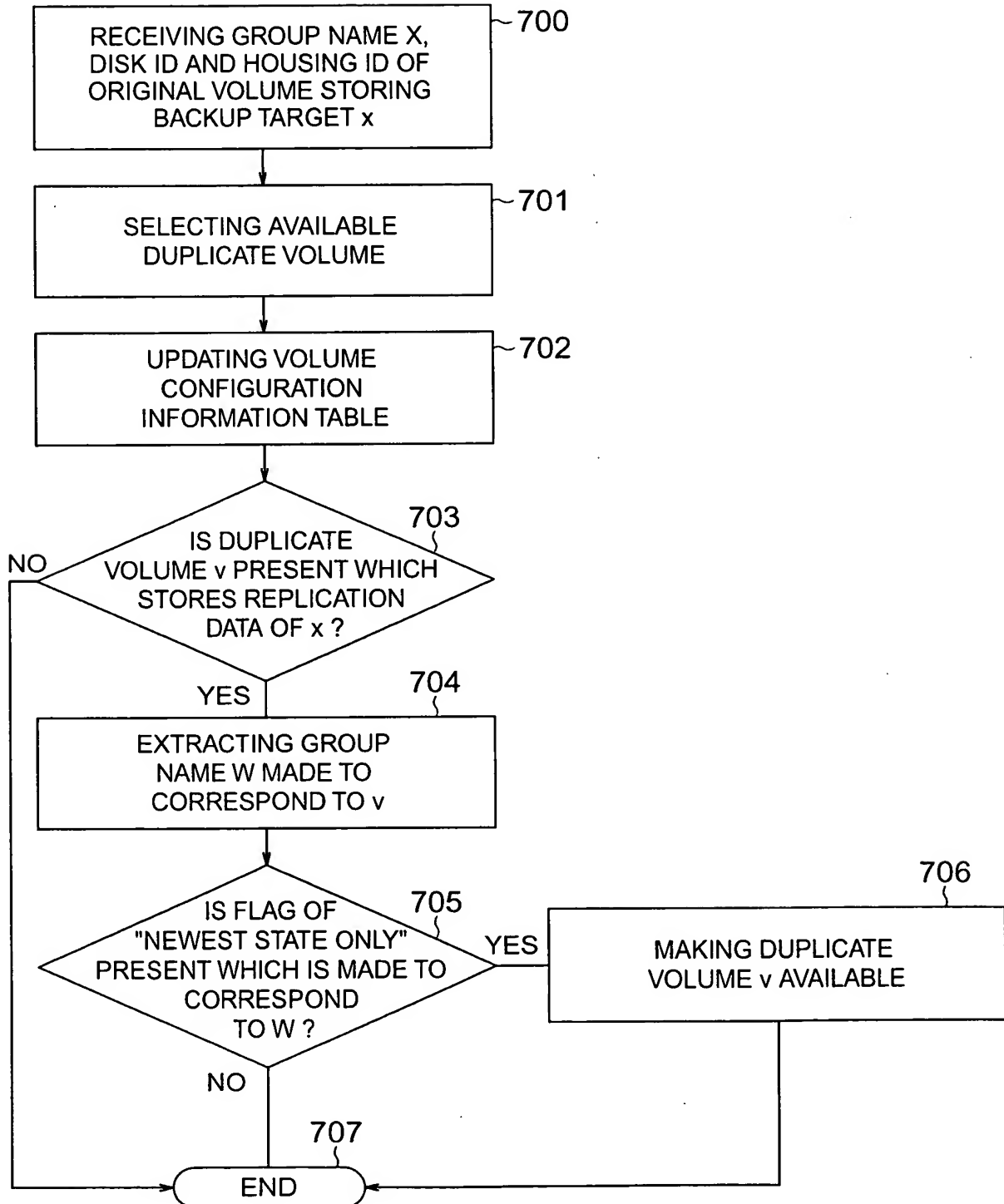


FIG. 8

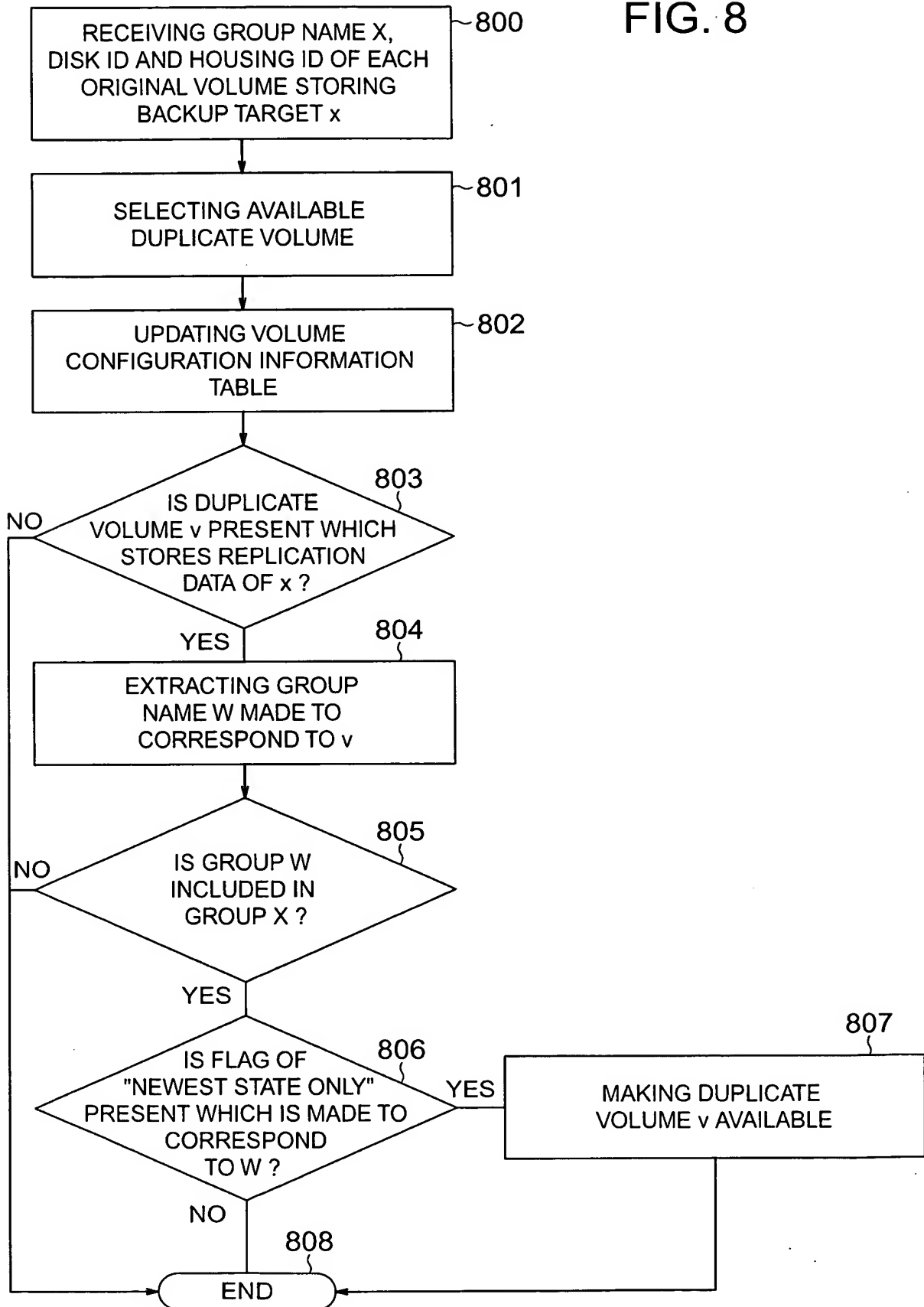


FIG. 9

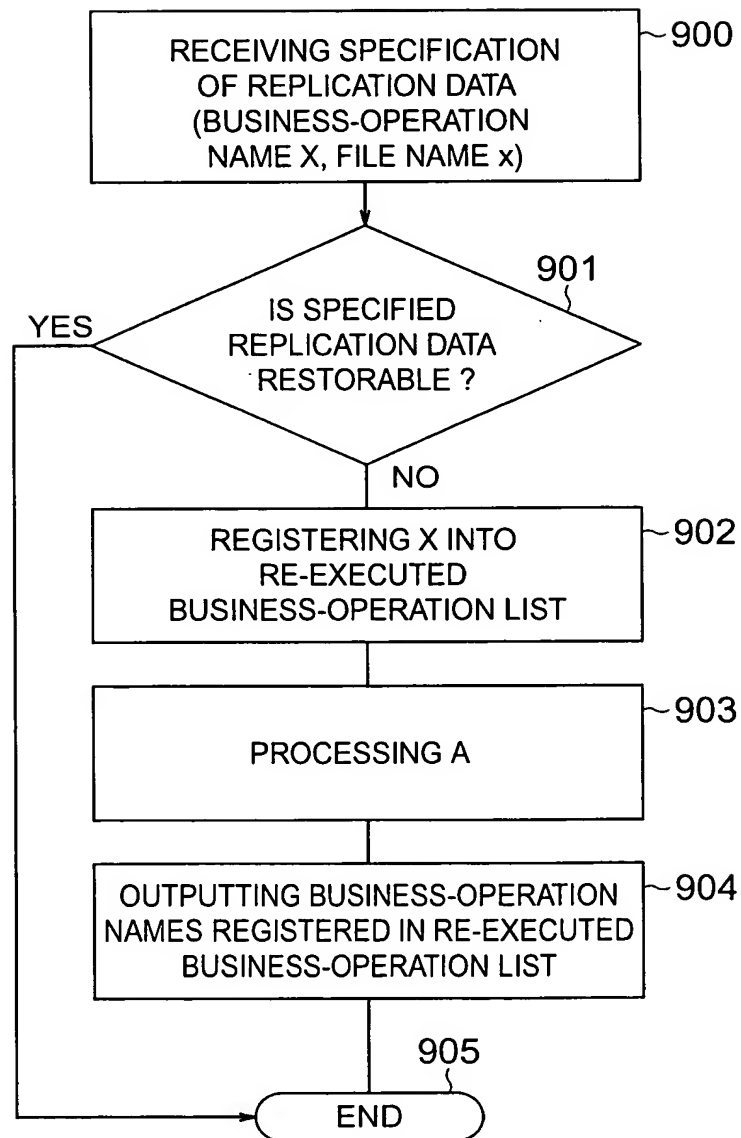




FIG. 10

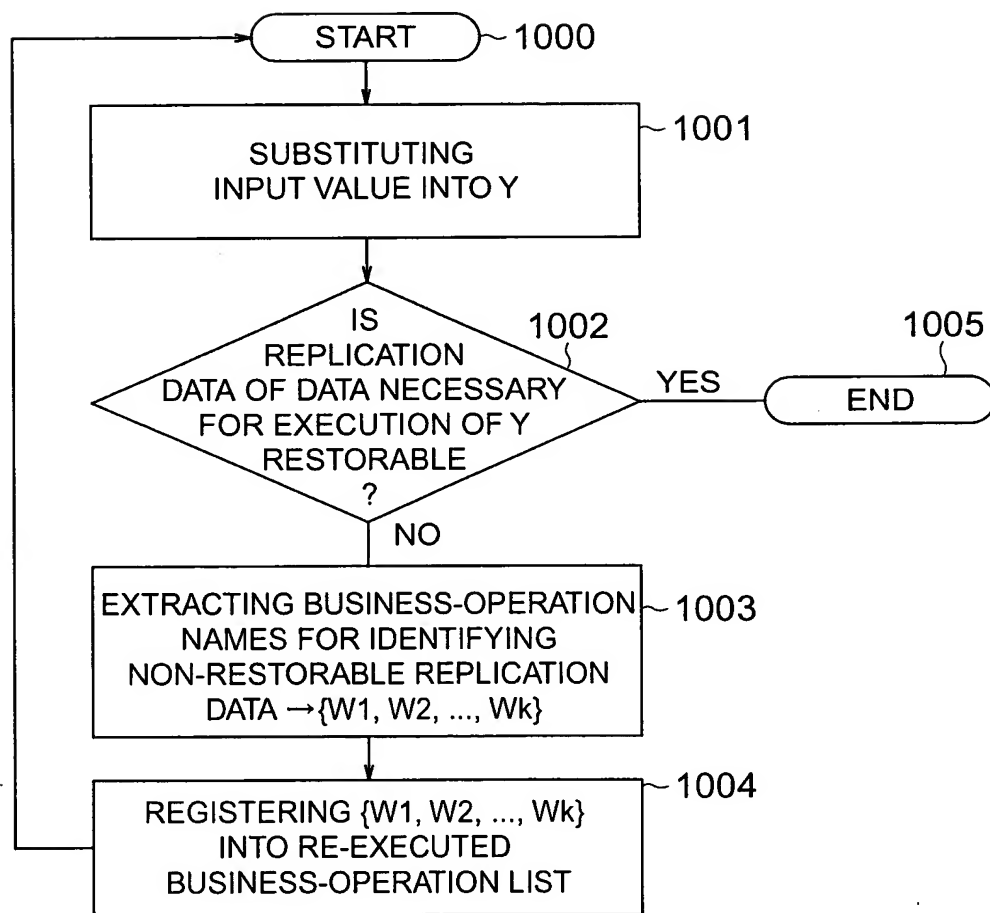


FIG. 11

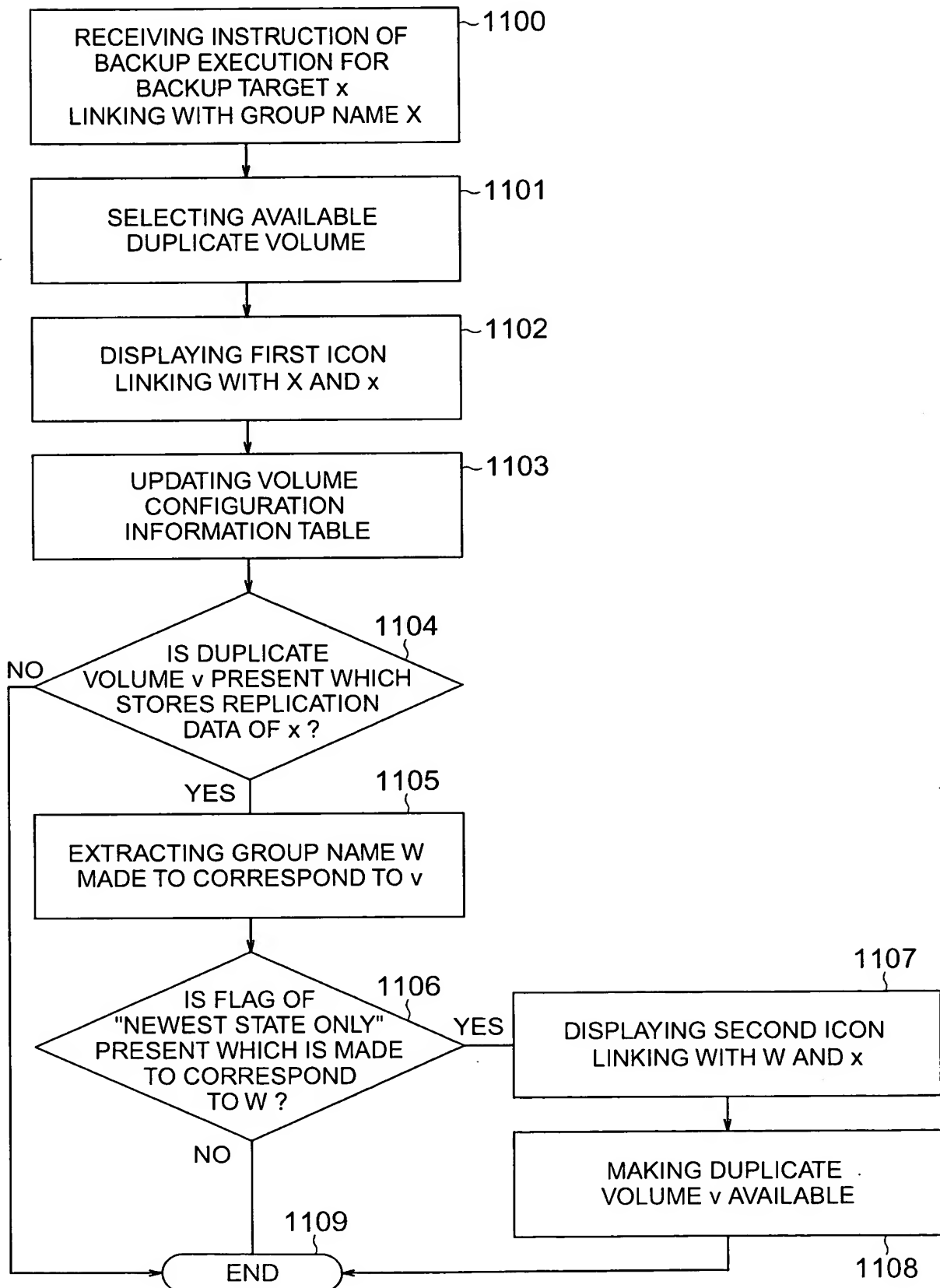


FIG. 12

